INDUSTRIAL AC/DC MODULAR CONFIGURABLE POWER SUPPLY 600W

Vox Power: NEVO+600S

Features:

- 600 watts output power
- Power density of (25W/in^3)
- Smallest modular footprint 5”x3”x1.61”
- Wide output voltage adjust range
- Constant current or voltage operation
- Parallel & series connection of modules
- Series tracker and I2C options
- Intelligent fan control
- Industrial approvals
- User and field configurable
- Low noise option (SL version)
- 2 Year warranty

Description:

Our innovative NEVO+600S modular configurable power supply is the smallest in its class and the ultimate power solution for demanding industrial applications where size, power density and weight are vital factors. Weighing only 600 grams, the compact package of 5” x 3” x 1.61” delivers up to 600 Watts - equating to a power density of 25 Watts per cubic inch.

Standard features include intelligent fan control providing optimised airflow for various load and temperature conditions, wide output voltage adjust, parallel and series connection of modules and an isolated 5V 200mA bias supply. A low noise fan option is available that allows you to use this innovative power supply in even the quietest of environments.

INPUT ELECTRICAL					
Parameter	Details	Min	Typ	Max	Units
AC input voltage	Nominal range is 100Vrms to 240Vrms	85		264	Vrms
AC input frequency	Contact factory for 400Hz operation.	47	50/60	63	Hz
DC input voltage	Standard	120		370	Vdc
Power rating	See graphs for deratings			600	Watts
Input current	600 Watts output at 120Vrms input			6	Amps
Inrush current	265Vrms (cold start)			20	Amps
Fusing	5x20 Fast acting			8	Amps
Input current limit	Maintains power factor		8		Amps
Efficiency	See graphs		86	89	%
Idle power	All outputs fitted and enabled		28		Watts
Idle power	All outputs fitted and disabled		21		Watts
Power factor	Typical value for 300 Watts output at 240Vrms input		0.96	0.99	
Holdup	600Watts output at 120Vrms input	17	20	21	mS
UVLO	Turn on only	78		84	Vrms
Over temperature	Internally monitored. Latching	115		125	°C
Reliability	40°C 80% load			2	FPMH

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INPUT ELECTRICAL						
Parameter		Details	Min	Typ	Max	Units
Signals	Bias voltage		4.8	5	5.2	V
	Bias current		0		200	mA
	Power good voltage	PNP open collector with internal 10k pull down resistor	8	10	15	V
	Power good current		0		20	mA
	Inhibit voltage		2		15	V
	Inhibit current	10k ohm input impedance	0.2		1.5	mA
	Global inhibit voltage		3		15	V
	Global inhibit current	5k ohm input impedance	0.6		3	mA
	AC_OK voltage		1		4	V
	AC_OK current		-10		20	mA
	AC_OK warning	See user manual for exceptions	5			mS

INSTALLATION			
Parameter	Details	Parameter	Details
Equipment class	I	Flammability rating	94V-2
Installation category	II	IP rating	IP10
Pollution degree	2	ROHS Compliance	2011/65/EC
Material group	IIIb (indoor use only)		

RELIABILITY				
Component	Details	Min	Max	Units
Fan	Mag Lev Std		2.7	FPMH
Input	Excluding FAN		2	FPMH
Output	See individual output datasheets		1	FPMH
Warranty			2	Years

SAFETY				
Parameter	Details	Min	Max	Units
Isolation Voltage	Input to output		4000	Vac
	Input to chassis		1500	Vac
	Output to chassis		250	Vdc
	Output to output		250	Vdc
Isolation Clearance	Primary to secondary (reinforced)	7		mm
	Primary to chassis (basic)	2.5		mm
Isolation Creepage	Primary to secondary (reinforced)	12		mm
	Primary to chassis (basic)	4		mm
Leakage Current	Standard: 265Vac, 63Hz, 25°C		1500	uA

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MECHANICAL	
Parameter	Details
Size	77.7mm x 133.7mm x 41.0mm (all external dimensions ± 1.0mm)
Weight	360 gram + 60 gram per output module
Mounting	Bottom or side mounting (see diagram for details)

ENVIRONMENTAL				
	Parameter	Details	Min	Max	Units
Operation	Temperature		-40	+85	°C
	Humidity	Relative, non-condensing	5	95	%
	Altitude		-200	5000	m
	Air pressure		54	106	kPa
	Temperature	Full power	-20	50	°C
		Derate input and outputs at 2.5%/°C	50	70	°C
	Humidity	Relative, non-condensing	5	95	%
	Altitude	(-200 to 2000m for UL60601-1)	-200	3000	m
	Air pressure		78	106	kPa
	Noise level	Variable. measured 1m from fan intake	36	60	dBA
	Shock	3000 bumps at 10G (16ms) half sine wave			
	Vibration	1.5G 10 to 200Hz sine wave, 20G for 15min in 3 axes random vibration			
Storage					

EMC			
	Parameter	Standard	Level
Emissions	Radiated electric field	EN55011, EN55022, FCC	B
	Conducted emissions	EN55011, EN55022, FCC	B
	Harmonic distortion	EN61000-3-2	Compliant
	Flicker & fluctuation	EN61000-3-3	Compliant
Immunity	Electrostatic discharge	EN61000-4-2 (15kV air, 8kV contact)	4
	Radiated RFI	EN61000-4-3 (10V/m)	3
	Fast transient burst	EN61000-4-4 (2kV)	3
	Input line surges	EN61000-4-5 (1kV L-N, 2kV L-E)	3
	Conducted RFI	EN61000-4-6 (10V)	4
	Power freq. magnetic field	EN61000-4-8 (10A/m)	3
	Voltage dips	EN61000-4-11 (EN55024)	Compliant

AGENCY APPROVALS		
Standard	Details	File
UL60950-1	UL60950-1 2nd edition revised December 19, 2011	UL: E316486
IEC/EN60950-1	IEC 60950-1:2005 (2nd Edition); Am 1:2009	
CSA-C22.2 No. 60950-1A-07	2nd Edition	
CE MARK	LVD 2014/35/EU	

CB certificate and report available on request

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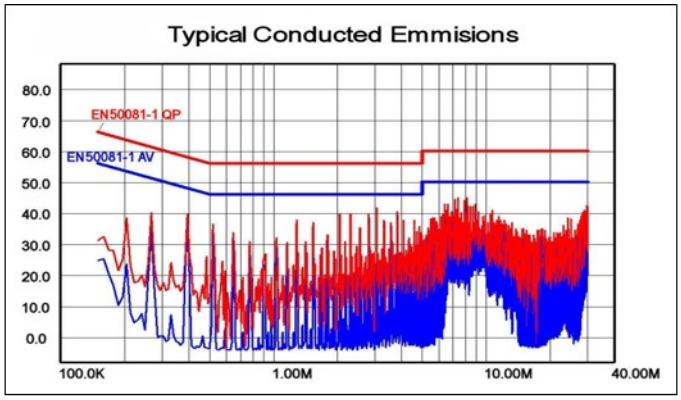

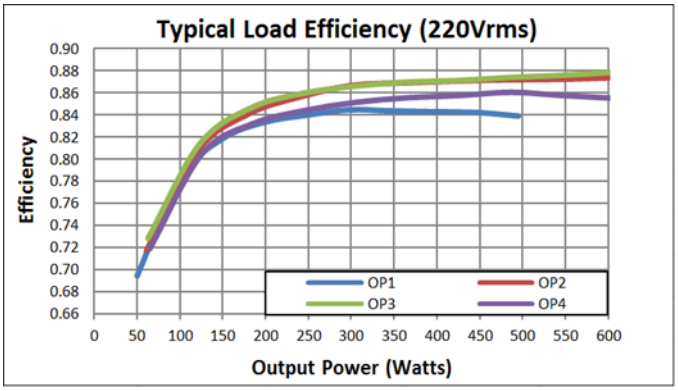

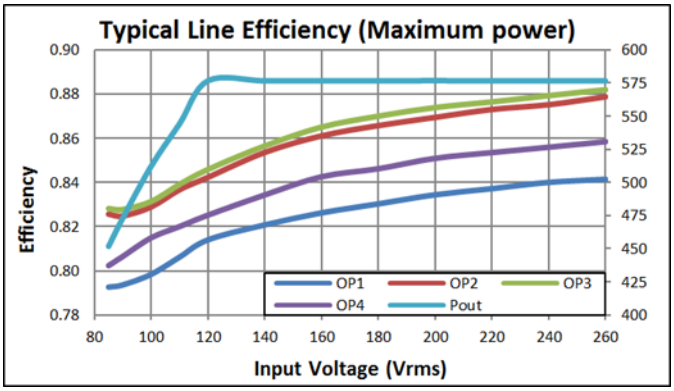

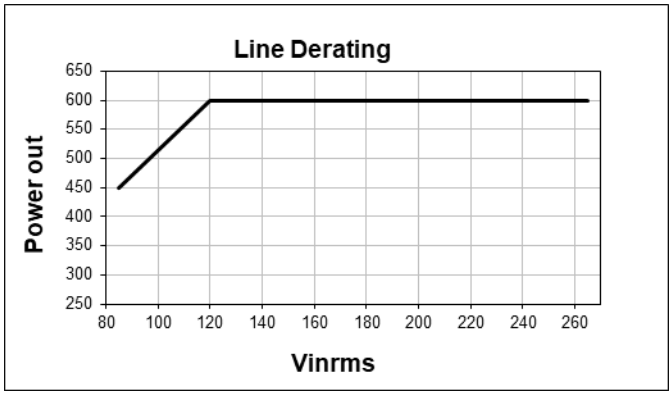

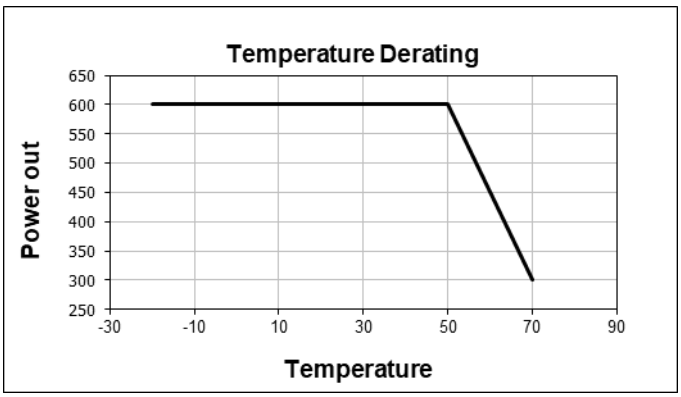

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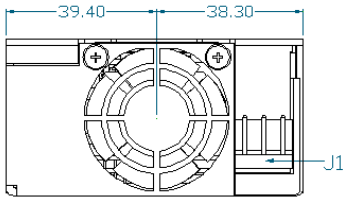
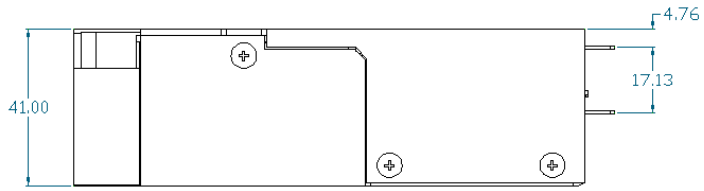
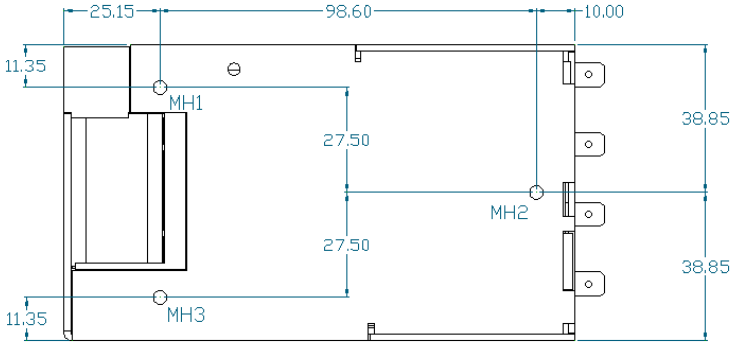
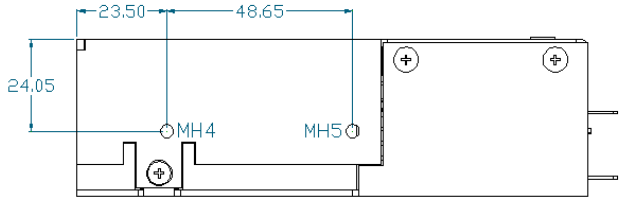
Mechanical Dimensions and Mounting Screws

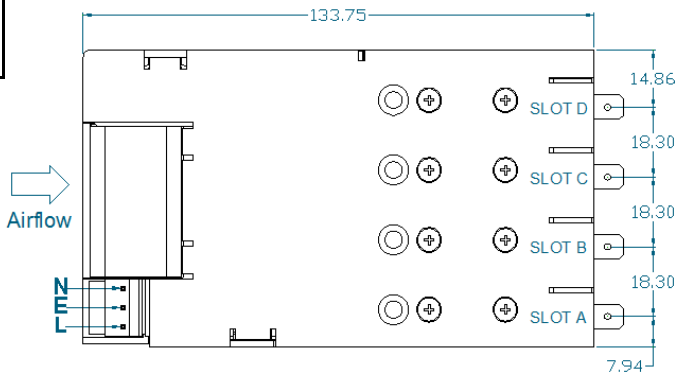


N - Neutral
E - Earth
L - Live









SCREWS	
MH1, MH2, MH3, MH4, MH5	
Screw type	M4
Tightening	Tighten to 0.55 Nm (1)
Penetration depth	4.00mm max including chassis
OUTPUT MODULES x 8	
Screw type	M3x5, C/Sink, Posi, Stainless Steel
Tightening	Tighten to 0.50 Nm (1)
Penetration depth	Defined by screw
CHASSIS x 5	
Screw type	M3x5, C/Sink, Posi, Stainless Steel
Tightening	Tighten to 0.50 Nm (1)
Penetration depth	Defined by screw
FAN x 2	
Screw type	M3x30, C/Sink, Posi, Stainless Steel
Tightening	Tighten to 0.50 Nm (1)
Penetration depth	Defined by screw

1. Torque settings are for general reference only. The torque settings shown in the datasheet are the insert manufacturers recommended values.

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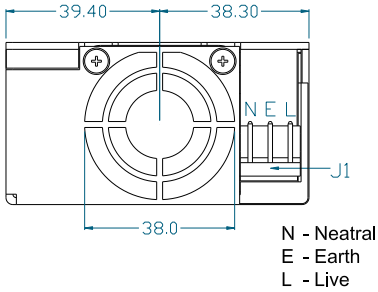
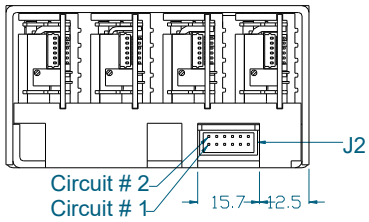
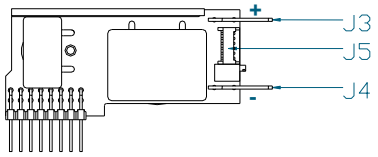
Connectors

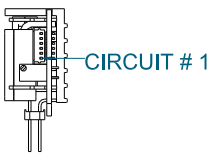
PINOUTS		
J1		
Circuit	Details	
1	Live	
2	Earth	
3	Neutral	
J2		
Circuit	Details	
1	Power good	Slot A
2	Inhibit	
3	Power good	Slot B
4	Inhibit	
5	Power good	Slot C
6	Inhibit	
7	Power good	Slot D
8	Inhibit	
9	Global inhibit	
10	AC OK	
11	+5V 200mA bias supply	
12	COM	
J5[4]		
Circuit	Details	
1	-Sense	
2	+Sense	
3	Voltage control	
4	Current control / share / out	
5	COM	
6	+5V local bias supply	





J3
Positive output
J4
Negative output





REF.	DETAILS	MANUFACTURER	HOUSING	TERMINAL
J1	MAINS INPUT: 3 Pin, 5.08mm, with Friction Lock, 18-24 AWG	MOLEX	10013036	0008701031
J2	GLOBAL SIGNALS: 12 Pin, 2mm, without Friction Lock, 24-30 AWG	MOLEX	511101251	0503948051
J3/4(1)	OUTPUT POWER TERMINAL: TAB SIZE 6.35mmx0.8mm	VARIOUS		VARIOUS
J5	OUTPUT SIGNALS: 6 Pin, 1.25mm, with Friction lock, 28-32 AWG	MOLEX	0510210600	0500588000

Notes
1. Terminal and wire current rating must exceed maximum short circuit output current. Eg. Output 1 = 25A*1.25 = 31.25Amps
2. Direct equivalents may be used for any connector parts
3. All cables must be rated 105°C min, equivalent to UL1015
4. Pinout is for single output types only

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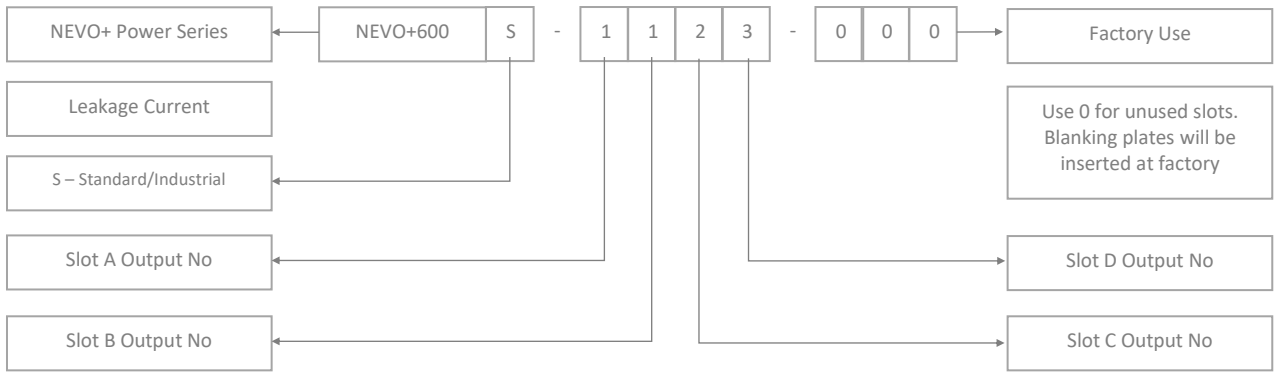
PART NUMBERING SYSTEM



Our design team will assist with value add requirement if an application requires standard/non-standard accessories or non-nominal voltage settings.
Once approved, the factory will issue a 3 or 4 digit code for your specific configuration which can be used for all future orders of the same configuration. When ordering an input unit with no outputs inserted, simply order NEVO+600S